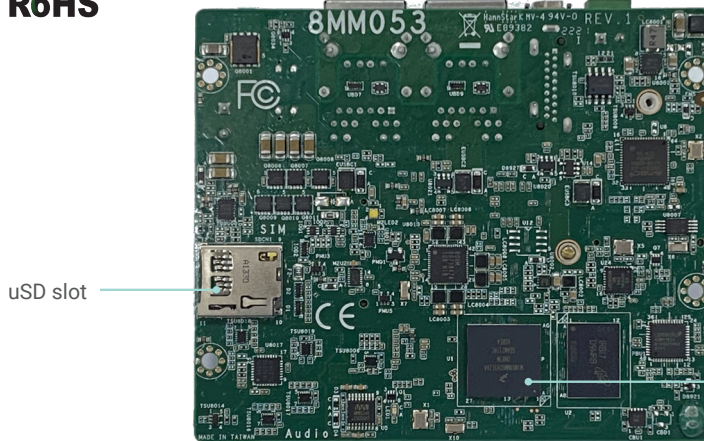


8MM053 ARM



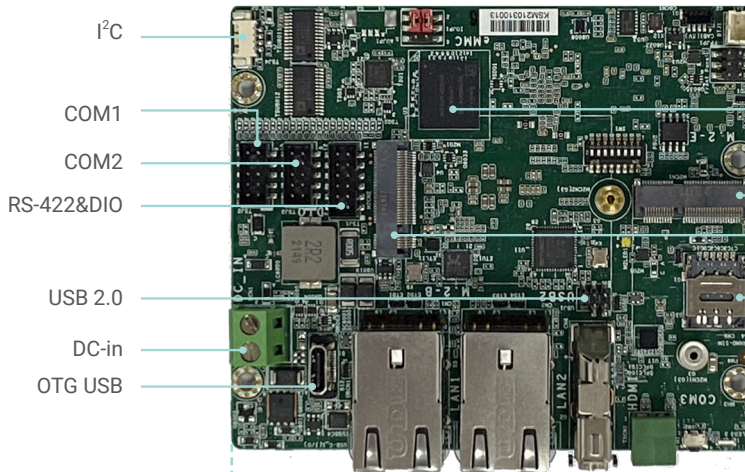
NXP® i.MX 8M mini Series



uSD slot

NXP i.MX8M Mini Processor

Bottom View



i2C

COM1

COM2

RS-422&DIO

USB 2.0

DC-in

OTG USB

Front Panel

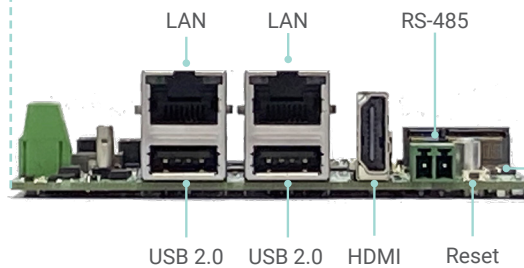
eMMC

M.2 E-Key

M.2 B-Key

Nano SIM

Top View



LAN

LAN

RS-485

USB 2.0

USB 2.0

HDMI

Reset

Status Led

KEY FEATURES



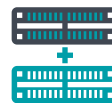
LPDDR4

1 LPDDR4 3200MHz memory down



FHD High Resolution

Supports FHD resolution



Multiple Expansion

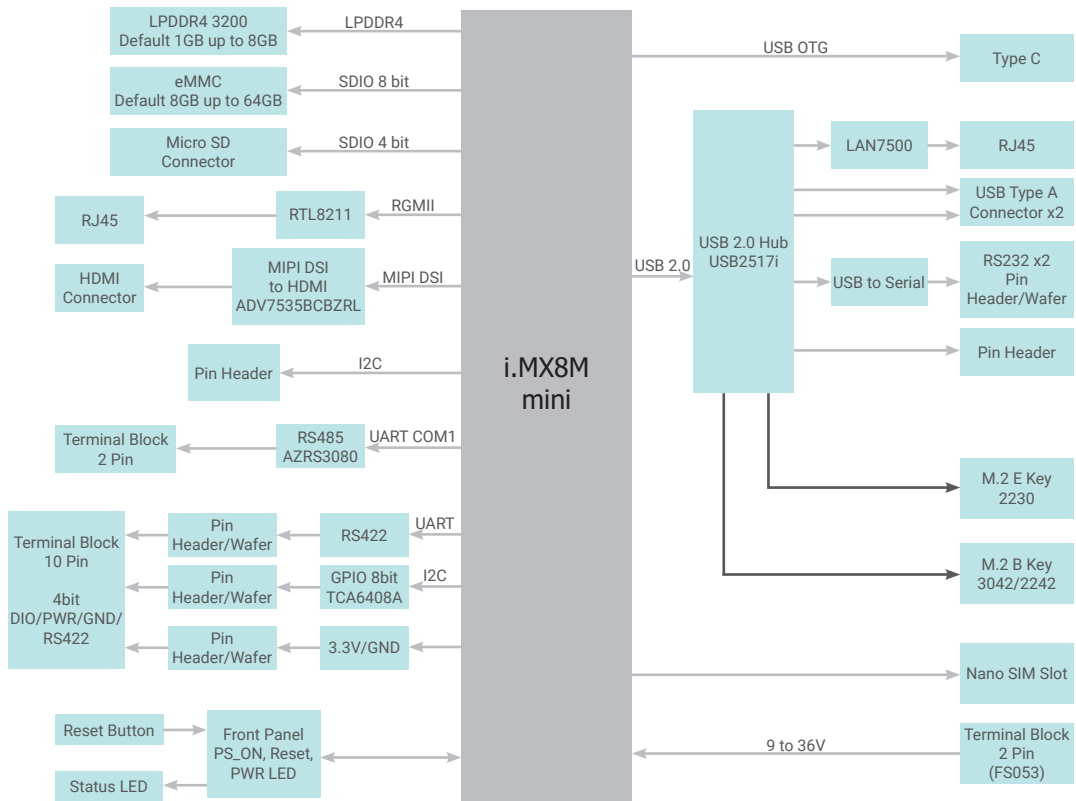
1 M.2 B Key, 1 M.2 E Key



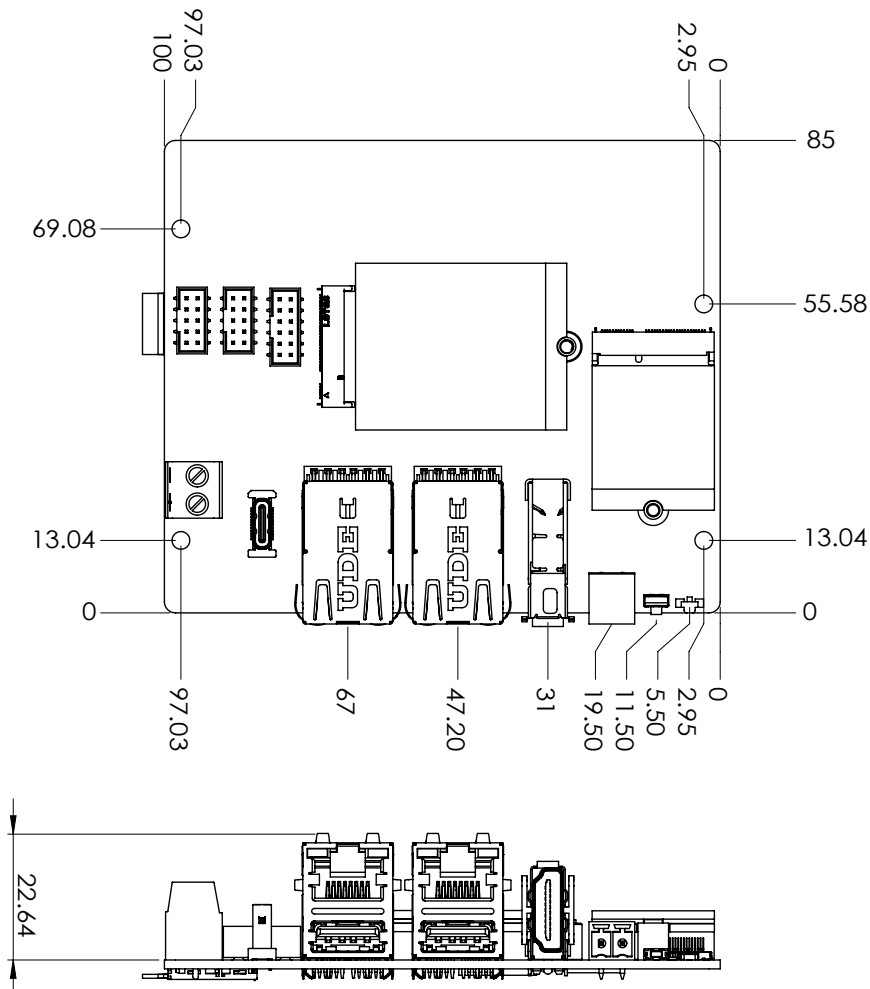
Rich I/O

2 GbE, 2 USB 2.0, 1 RS-485, 2 RS-232, RS-422, DIO

BLOCK DIAGRAM



MECHANICAL DRAWING



SPECIFICATION

System	Processor	NXP i.MX 8M mini applications processors NXP i.MX 8M mini Quad Cortex-A53 1.8GHz (Consumer) NXP i.MX 8M mini Quad Cortex-A53 1.6GHz (Industrial)				
	Memory	4GB Memory Down (1GB/2GB by project support) Single Channel LPDDR4				
Graphics	Controller	2D-GC320 3D-GC NanoULTRA				
	Feature	OpenGL® ES 2.1 VPU Decode: 1080p60 HEVC, H.264, VP9, VP8 VPU Encode: 1080p60 H.264, VP8				
	Display	1 x HDMI (default)	HDMI: resolution up to 1920x1080 @60Hz			
	Single Display	HDMI				
Expansion	Interface	1 x M.2 B key 3042/2242 (USB 2.0), Nano SIM slot support				
		1 x M.2 E key 2230 (USB 2.0)				
Ethernet	Controller	1 x RTL8211 Ethernet (10/100/1000Mbps)				
Rear I/O	Ethernet	2 x GbE (RJ-45)				
	Serial	1 x RS-485(2 poles terminal block)				
	USB	2 x USB 2.0 1 x Reset Button				
	Display	1 x HDMI				
Internal I/O	Serial	2 x RS-232 (2 x 5 header, 2mm pitch)				
	USB	1 x USB 2.0 (2mm pitch)				
	DIO and RS-422	DIO (4 DIO/PWR/GND) and RS-422(4pin) (2 x 6 header, 2mm pitch)				
	SD	1 x Micro SD Slot				
	I ² C	1 x I ² C (1.25mm pitch)				
	eMMC	Support eMMC 5.1 8GB on board (default) Support up to 64GB (opt.)				
Watchdog Timer	Output & Interval	System Reset, Programmable via Software from 1 to 255 Seconds				
Power	Type	DC 9V to 36V				
	Connector	2-poles Terminal Block (default)				
	RTC Battery	CR2032 with cable				
OS Support	OS Support	Yocto 3.3 on eMMC (default)				
Environment	Temperature	Operating: -5 to 65°C; -40 to 80°C Storage: -40 to 85°C				
		Humidity	Operating: 5 to 90% RH Storage: 5 to 90% RH			
Mechanism	Dimensions		100mm (3.94") x 85mm (3.35")			
	Height	PCB: 1.6mm				
		Top Side: 22.64mm Bottom Side: 4mm				
Standards and Certifications	Certifications	CE, FCC Class A, RoHS				

ORDERING INFORMATION

Model Name	P/N	Processor	Memory	eMMC	Temp.	OS
8MM053	770-8MM0531-200G	Quad Cortex-A53 1.8GHz	4GB	8GB	-5 to 65°C	Yocto 3.3 (Kernel 5.10)
8MM053	770-8MM0531-500G	Quad Cortex-A53 1.6GHz	4GB	8GB	-40 to 80°C	Yocto 3.3 (Kernel 5.10)